

What is claimed is:

1. An active-matrix addressed reflective LCD (liquid crystal display), which comprises:

5 a first substrate (74) which is transparent, a second substrate (56), a lower insulation film (60) formed on said second substrate, a plurality of switching elements (84) respectively provided for each pixel, an insulation layer (66, 68) having a surface irregularly configured, and a reflection film (70) formed on said insulation film and having an irregularly configured surface depending on the irregular surface of said  
10 insulation film; and a liquid crystal layer provided between said first substrate and said reflection film, characterized by

an upper electrode (62) being provided for each pixel and located in a region wherein said reflection film is provided, said upper electrode being electrically coupled to a source electrode of the switching element; and

15 a lower electrode (58) provided between said second substrate and said lower insulation film, said lower electrode forming a storage capacitance with said upper electrode.

2. The active-matrix addressed reflective LCD as claimed in claim 1, wherein  
20 the irregularly configured surface of said insulation film comprises a plurality of substantially linear projections, and a plurality of recesses surrounded by the linear projections.

3. The active-matrix addressed reflective LCD as claimed in claim 1 or 2,  
25 wherein the switching element of a given pixel is a thin film transistor whose gate electrode is coupled to a gate line, and said lower insulation layer functions as a gate insulation layer, and wherein said lower electrode is coupled to a gate line assigned to a pixel adjacent to said given pixel.

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4. The active-matrix addressed reflective LCD as claimed in any of claims 1 or 3, wherein said lower insulation film has no step on the surface thereof in a region wherein said reflection film is provided.

5. The active-matrix addressed reflective LCD as claimed in any of claims 1 to 3, wherein said insulation layer comprises a first layer patterned by lithography so as to have the irregular configuration on the surface thereof, and a second layer formed on said first layer such as to imitate the irregular surface of said first layer.

10 6. The active-matrix addressed reflective LCD as claimed in any of claims 1 to 4, wherein said reflection film is electrically coupled to said upper electrode or said source electrode via a contact hole provided in said insulation layer.

15 7. The active-matrix addressed reflective LCD as claimed in any of claims 1 to 4, wherein said source electrode is electrically coupled to said reflection film.

8. A method of fabricating an active-matrix addressed reflective LCD, comprising the steps of:

- 20 (a) forming a reflection layer (62) on a substrate (56);  
(b) forming an insulation layer (66) on said reflection layer, after which said insulation layer is patterned by exposure so as to provide irregularity on the surface of said insulation layer; and  
(c) forming a reflection film (70) on said insulation film,  
wherein said insulation layer is patterned with assist of light reflected by said  
25 reflection layer.

9. The method as claimed in claim 8, wherein said reflection layer (62) is formed such that the surface thereof is flattened.

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10. The method as claimed in claim 8 or 9, wherein said reflection layer (62) is used as one of two electrodes of a storage capacitor developed in each pixel of said reflective LCD.

5 11. The method as claimed in any of claims 8 to 10, wherein the step (b) comprises:

    patterning a first photoresist layer by exposure so as to form a predetermined irregularity on a surface of said first photoresist layer; and

10      forming a second photoresist layer on the patterned first photoresist layer, thereby forming irregularity on a surface of said second photoresist layer.

12. The method as claimed in any of claims 8 to 11, wherein the step (b) comprises:

15      exposing a photoresist layer using at low intensity of exposing light so as to form a predetermined irregularity on said photoresist layer; and  
    exposing said photoresist layer at high intensity of exposing light so as to form a contact hole.

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